

REMARKS

Claims 19-35 are pending in the application, claims 1-18 having been canceled above and new claims 19-35 having been added above.

Applicant thanks the Examiner for the courtesies extended to Applicant's representative Martin A. Bruehs during the telephone interview of July 14, 2003. In particular, Applicant thanks the Examiner for acknowledging that a claim, which recites that the solvent used in the method of claim 19 is selected from the group consisting of silanes, fluorohydrocarbons and mixtures thereof, is patentably distinguished from the cited prior art.

Turning now to the Official Action issued on January 14, 2003, Applicant thanks the Examiner for withdrawing the majority of the 35 U.S.C. §112, second paragraph, rejections in view of Applicant's amendment filed on December 27, 2002, in the parent application.

Claims 12 and 17 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite. Applicant has canceled claims 12 and 17. However, new claims 27 and 32, which correspond to canceled claims 12 and 17, have been presented to address the §112 issues of claims 12 and 17. Specifically, new claim 27 excludes the word "derivative" and new claim 32 includes the word "amide" after the words "pentafluoropropanoic acid and trifluoroacetic acid."

Claims 1-4 and 7-17 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Klebe* (U.S. Patent No. 3,397,220) in view of *Kotzsch* (U.S. Patent No. 4,647,681). Also, claims 1-4, 7-17 and 19-21 were rejected under §103(a) as being unpatentable over

Mawhinney (U.S. Patent No. 4,469,794) in view of *Schinohara* (U.S. Patent No. 4,663,471) or alternatively in view of Chem. Abstract '694 (CA: 76:59694) and claims 1-4, 7-17 and 19-20 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Klebe* in view of *Schinohara* and in view of *Mawhinney*. As the previously pending claims have been canceled, the above rejections are moot. However, in an effort to expedite prosecution of the continuation Application, Applicant provides the following remarks.

The present invention relates to the synthesis of bis(silyl) amide, more particularly to compositions with a high content of NO-bis(trialkylsilyl) amide. The invention also relates more particularly to bis(trialkylsilyl) amides which can be used as silylating agents. (See specification at page 1, lines 3-8.)

For example, independent claim 19, as added above, defines a process for bis silylating an acylamide, the process comprising subjecting an amide bearing a group R_f (perfluoroalkyl) to a trialkylsilyl halide in the presence of a base whose carbon number is not more than about 10 and whose halide, or hydrohalide, is insoluble and in the presence of a solvent selected from the group consisting of silanes, fluorohydrocarbons and mixtures thereof, wherein the solvent has a reactive dielectric constant of not more than 5, and wherein the solvent has a boiling point at atmospheric pressure, of not more than about 100°C.

Also, independent claim 35 defines a process for bis silylating an acylamide, the process comprising subjecting an amide bearing a group R_f (perfluoroalkyl) to a trialkylsilyl halide in the presence of a base whose carbon number is not more than about 10 and whose halide, or hydrohalide, is insoluble and in the presence of a solvent selected

from the group consisting of silanes, fluorohydrocarbons and mixtures thereof, wherein the solvent has a dielectric constant at not more than 5.

To establish a *prima facie* case of obviousness, the prior art reference (or references when combined) must teach or suggest all of the claim elements. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). In addition, "all words in a claim must be considered in judging the patentability of that claim against the prior art." In re Wilson, 424 F.2d 1382, 1385; 165 USPQ 494, 496 (CCPA 1970). See M.P.E.P. §2143.03.

The above-cited references, alone or in combination, fail to establish a *prima facie* case of obviousness because they do not teach or suggest all of the claim elements. First, with respect to the rejection over *Klebe* in view of *Kotzsch*, Applicant submits that *Klebe* essentially teaches using a plain bis silylacetamide. *Klebe* does not provide a detailed description of its synthesis. The only Example in *Klebe*, namely, Example 2, which provides no yield, does not use a solvent in the disclosed reaction. Moreover, as admitted in the Official Action at page 5, *Klebe* does not discuss perfluoroalcanoic derivatives. Moreover, the only solvent disclosed in *Klebe* is a solvent that is more polar than the solvents of claims 19 and 35. More importantly, the solvent of *Klebe* is disclosed for the use of bis silylacetamide, not for its synthesis. Accordingly, Applicant submits that *Klebe* fails to teach or suggest many of the elements of claims 19 and 35.

Kotzsch fails to overcome the above deficiencies of *Klebe*. In particular, *Kotzsch* only appears to address the difficulties of bis silylating amides. (See *Kotzsch* at column 1, lines 36-68.) In particular, Applicant submits that this portion of *Kotzsch* explains why it is undesirable to use a solvent during bis silylation of an amide (e.g., impairing the

completeness of the reaction and the yield, danger of delayed reaction, etc.). In view of these disclosed disadvantages, Applicant submits that this reference actually teaches away from combining with *Klebe* to arrive at the claimed processes for bis silylating an acylamide in the presence of the claimed solvent. Moreover, Applicant submits that in Example 3 of the instant application (see 4th line of Table), Applicant attempted to reproduce Example 3 of *Kotzsch*. Applicant found the process of Example 3 to be unsuccessful.

In view of the above deficiencies, Applicant submits that, even if combined, the cited references fail to teach or suggest the processes of claims 19 and 35 directed to bis silylating an acylamide in the presence of the specified solvents. Thus, Applicant submits that the asserted combination does not establish a *prima facie* case of obviousness because it does not teach or suggest all of the claim elements.

Additionally, the combination of cited references does not reflect a proper consideration of "all words" in the claim. In particular, because neither of the cited references, alone or in combination, discloses or suggests a process for bis silylating an acylamide in the presence of a solvent selected from the group consisting of hydrocarbons, silanes, fluorohydrocarbons and mixtures thereof or in the presence of a solvent selected from the group consisting of silanes, fluorohydrocarbons and mixtures thereof, having the specified dielectric constant and boiling point, as set forth in independent claims 19 and 35, respectively, Applicant submits that the Official Action does not give full consideration to all of the claim elements. That is, patentable weight must be given to "in the presence of a solvent selected from the group consisting of hydrocarbons, silanes, fluorohydrocarbons

and mixtures thereof" and "in the presence of a solvent selected from the group consisting of silanes, fluorohydrocarbons and mixtures thereof," and "wherein the solvent has a reactive dielectric constant of not more than 5" and "wherein the solvent has a boiling point at atmospheric pressure, of not more than 100°C," in judging the patentability of claims 19 and 35 over the cited combination of references.

For at least these reasons, claims 19 and 35 are patentable over the combination of *Klebe* in view of *Kotzsch*. As the remaining claims depend, directly or indirectly, from claim 19, Applicant submits that the remaining claims are also patentable over *Klebe* in view of *Kotzsch* for at least the reasons that claim 19 is patentable thereover.

With respect to the rejection of *Mawhinney* in view of *Shinohara* or alternatively in view of Chem. Abstract 694, Applicant provides the following remarks.

Applicant again submits that the combination of these references fails to establish a *prima facie* case of obviousness because the combination does not teach or suggest all of the claim elements and does not consider "all words" in the claims. See M.P.E.P. §2143.03.

Specifically, *Mawhinney* does not relate to a bisyltrifluoroacetamide. *Mawhinney* is substantially directed to using a silylating agent of either N-methyl, silyltrifluoroacetamide or of O-silyl-N-silylacetamide, for analysis purposes. Moreover, while *Mawhinney* discloses the synthesis of N-methyl, N-silyltrifluoroacetamide and O-silyl-N-silylacetamide, *Mawhinney* fails to disclose or suggest the bis silylated perfluoroalcanamides that are the subject of the present invention.

Shinohara fails to overcome the above deficiencies of *Mawhinney*. That is, *Shinohara* is directed to the preparation of N-methyl-N-trimethylsilyl trifluoroacetamide, a monosilylated compound, using a bis silylated acetamide. *Shinohara* does not, however, disclose or suggest bis silylating a perfluorinated amide, as defined in claims 19 and 35. Specifically, when *Shinohara* discusses a bis silylated amide, the amide is not discussed for the purpose of explaining its synthesis but instead for its use.

Applicant also submits that Chem. Abstract '694 does not overcome the above deficiencies of *Mawhinney*. That is, even if combined with CA '694, the combination of *Mawhinney* in view of CA '694, would not lead one to arrive at the processes of claims 19 and 35, which define processes for bis silylation an acylamide in the presence of a solvent selected from the group consisting of hydrocarbons, silanes, fluorohydrocarbons and mixtures thereof and silanes, fluorohydrocarbons and mixtures thereof, respectively.

In view of the deficiencies of the above cited combinations of references, Applicant submits that the cited references do not establish a *prima facie* case of obviousness, because they do not teach or suggest all of the claim elements.

Additionally, the combination of cited references does not reflect the proper consideration of "all words" in the claims. In particular, because none of the cited references, alone or in combination, discloses or suggests bis silylation of an acylamide in the presence of a solvent selected from the group consisting of hydrocarbons, silanes, fluorohydrocarbons and mixtures thereof or silanes, fluorohydrocarbons and mixtures thereof, Applicant submits that the rejection does not give full consideration to all of the claim elements. That is, patentable weight must be given to "a solvent selected from the

group consisting of hydrocarbons, silanes, fluorohydrocarbons and mixtures thereof," and "silanes, fluorohydrocarbons and mixtures thereof," in judging the patentability of claims 19 and 35 over the cited combination of references.

For at least these reasons, claims 19 and 35 are patentable over the combination of *Mawhinney* in view of *Shinohara* or Chem. Abstract 694. As the remaining claims depend, directly or indirectly, from independent claim 19, Applicant submits that the remaining claims are also patentable over the asserted combinations of references for at least the reasons that claim 19 is patentable thereover.

Finally, with respect to the rejection over *Klebe* in view of *Shinohara* and in view of *Mawhinney*, Applicant submits that the above discussion addresses the deficiencies of each of these references. Applicant submits that the combination of these references also fails to establish a *prima facie* case of obviousness because the combination does not teach or suggest each element of claims 19 and 35 and does not provide proper consideration of "all words" in these claims.

From the foregoing, Applicant earnestly solicits prompt and favorable examination on the merits.

If there are any questions concerning this paper or the application in general,
Applicant invites the Examiner to telephone the undersigned at her earliest convenience.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

By: 

Martin A. Bruehs
Registration No. 45,635

P.O. Box 1404
Alexandria, Virginia 22313-1404
(703) 836-6620

Date: December 23, 2003